SEMICONDUCTOR LAYER WITH ROUGHNESS PATTERNING

ABSTRACT OF THE DISCLOSURE

A method for making an IC on a surface of a planar substrate includes forming a continuous first layer on the surface of the substrate and pressing a surface of a stamp into the first layer to produce a pattern of non-intersecting smooth regions on the surface. A rough region of the surface of the first layer laterally borders and laterally surrounds each smooth region of the surface of the first layer. The pattern of smooth and rough regions on the surface of the first layer copies a pattern of smooth and rough areas on the surface of the stamp. The method also includes forming a continuous second layer on the patterned first layer. The first layer is one of a dielectric layer and an organic semiconductor layer, and the second layer is the other of a dielectric layer and an organic semiconductor layer.